

**AMENDMENTS TO THE CLAIMS:**

---

**Claim 1 (Previously cancelled)**

**Claim 2 (Previously cancelled)**

**Claim 3 (Previously amended):** The two—stage actuator type magnetic head positioning mechanism according to Claim 9, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, and

wherein a center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and

wherein said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 4 (Previously amended):** The two-stage actuator type magnetic head positioning mechanism according to Claim 10, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, and

wherein said center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction

Cl  
Pent

being intersected almost at right angles to said center axis of said actuator spring, and

wherein said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 5 (Previously amended):** The two—stage actuator type magnetic head positioning mechanism according to Claim 29,

wherein said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring, and

wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and said driving spring section is mounted between said actuator spring and said magnetic head supporting section.

**Claim 6 (Previously amended):** The two-stage, actuator type magnetic head positioning mechanism according to Claim 30, wherein

said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements

is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring, and

wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and said driving spring section is mounted between said actuator spring and said magnetic head supporting section.

**Claim 7 (Previously amended):** The two-stage actuator type magnetic head positioning mechanism according to Claim 9, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and

wherein said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

c1  
cont

**Claim 8 (Previously amended):** The two—stage actuator type magnetic head positioning mechanism according to Claim 10, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and

wherein said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 9 (Previously re-presented-formerly dependent claim 9):**

A two—stage actuator type magnetic head positioning mechanism comprising:

a plurality of fine actuator sections which minutely drives, by a pair of piezo-electric elements mounted in said fine actuator sections, a magnetic head supporting section adapted to support a slider on which a magnetic head is attached;

a plurality of holder arms to support each of said fine actuator sections;

Cl  
Cup if

an arm block formed by integrally unifying said plurality of holder arms; and

a voice coil motor to drive said arm block;

wherein said fine actuator section is composed of an actuator spring made from one thin steel plate and a base plate made from one thick steel plate, both of which overlap each other,

wherein a driving spring section being connected to said magnetic head supporting section is mounted on said actuator spring and, in a vicinity of said driving spring section, a pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements along a longitudinal axis is formed in a state being symmetrical right and left and parallel with respect to a longitudinal center axis of said actuator spring,

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids,

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids,

wherein said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of

CI  
Cont

said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring, wherein

each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and

said driving spring section is mounted between said actuator spring and said magnetic head supporting section, wherein

a part of said base plate on which said magnetic supporting section is laid is separated from a main portion of said base plate in a state in which the separated part of said base plate is nested in said main portion of said base plate and is junctioned to said magnetic head supporting section and a pair of second driving voids being laid on said pair of driving voids so that said pair of second driving voids and said pair of driving voids overlap each other are formed between said portion of said base plate separated to be nested in said main portion of said base plate and said main portion of said base plate and wherein

both end portions of each of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring through said portion of said base plate separated to be nested in said main portion of said base plate and said main portion of said base

plate in a manner that each of said piezo— electric elements straddles each of said second driving voids.

**Claim 10 (Previously re-presented-formerly dependent claim 10):**

A two—stage actuator type magnetic head positioning mechanism comprising:

a plurality of fine actuator sections which minutely drives, by a pair of piezo-electric elements mounted in said fine actuator sections, a magnetic head supporting section adapted to support a slider on which a magnetic head is attached;

a plurality of holder arms to support each of said fine actuator sections;

an arm block formed by integrally unifying said plurality of holder arms; and

a voice coil motor to drive said arm block;

wherein said fine actuator section is composed of an actuator spring made from one thin steel plate and a base plate made from one thick steel plate, both of which overlap each other,

wherein a driving spring section being connected to said magnetic head supporting section is mounted on said actuator spring and,

in a vicinity of said driving spring section, a pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements along a longitudinal

Cl  
Can't

C1  
cont

axis is formed in a state being symmetrical right and left and parallel with respect to a longitudinal center axis of said actuator spring,

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids,

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids,

wherein said base plate is opened at a place where said base plate and said magnetic head supporting section overlap each other and is junctioned to said actuator spring in a manner such that said base plate surrounds external edges of said driving spring section of said actuator spring,

wherein said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring,

wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of



CI  
Cont

said driving voids along both sides of said mounting position of said magnetic head supporting section,

said driving spring section is mounted between said actuator spring and said magnetic head supporting section, and wherein

a part of said base plate on which said magnetic supporting section is laid is separated from a main portion of said base plate in a state in which the separated part of said base plate is nested in said main portion of said base plate and is junctioned to said magnetic head supporting section and second driving voids being laid on said other driving voids so that said second driving voids and said other driving voids overlap each other are formed between said portion of said base plate separated to be nested in said main portion of said base plate and said main portion of said base plate and

wherein both end portions of each of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring through said portion of said base plate separated to be nested in said main portion of said base plate and said main portion of said base plate in a manner that each of said piezo-electric elements straddles each of said second driving voids.

**Claim 11 (Previously re-presented-formerly dependent claim 11):**

A two—stage actuator type magnetic head positioning mechanism comprising:

C1  
cont

a plurality of fine actuator sections which minutely drives, by a pair of piezo-electric elements mounted in said fine actuator sections, a magnetic head supporting section adapted to support a slider on which a magnetic head is attached;

a plurality of holder arms to support each of said fine actuator sections;

an arm block formed by integrally unifying said plurality of holder arms; and

a voice coil motor to drive said arm block;

wherein said fine actuator section is composed of an actuator spring made from one thin steel plate and a base plate made from one thick steel plate, both of which overlap each other,

wherein a driving spring section being connected to said magnetic head supporting section is mounted on said actuator spring and,

in a vicinity of said driving spring section, a pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements along a longitudinal axis is formed in a state being symmetrical right and left and parallel with respect to a longitudinal center axis of said actuator spring,

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids,

C/  
Cant

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids,

wherein said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring,

wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and said driving spring section is mounted between said actuator spring and said magnetic head supporting section, and

wherein said pair of driving voids are formed so as to be intersected in a slanting direction in a manner that a distance between said pair of driving voids is increased gradually toward said magnetic head from said holder arm side.

**Claim 12 (Previously re-presented-formerly dependent claim 12):**

A two—stage actuator type magnetic head positioning mechanism comprising:

Cl  
con

a plurality of fine actuator sections which minutely drives, by a pair of piezo-electric elements mounted in said fine actuator sections, a magnetic head supporting section adapted to support a slider on which a magnetic head is attached;

a plurality of holder arms to support each of said fine actuator sections;

an arm block formed by integrally unifying said plurality of holder arms; and

a voice coil motor to drive said arm block;

wherein said fine actuator section is composed of an actuator spring made from one thin steel plate and a base plate made from one thick steel plate, both of which overlap each other,

wherein a driving spring section being connected to said magnetic head supporting section is mounted on said actuator spring and,

in a vicinity of said driving spring section, a pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements along a longitudinal axis is formed in a state being symmetrical right and left and parallel with respect to a longitudinal center axis of said actuator spring,

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids,

C/  
Cont

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids,

wherein said base plate is opened at a place where said base plate and said magnetic head supporting section overlap each other and is junctioned to said actuator spring in a manner such that said base plate surrounds external edges of said driving spring section of said actuator spring,

wherein said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring,

wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and said driving spring section is mounted between said actuator spring and said magnetic head supporting section, and

wherein said pair of driving voids are formed so as to be intersected in a slanting direction in a manner that a distance between said

C/  
C<sub>un</sub>4

pair of driving voids is increased gradually toward said magnetic head from said holder arm side.

**Claim 13 (Previously re-presented-formerly dependent claim 13):**

A two—stage actuator type magnetic head positioning mechanism comprising:

a plurality of fine actuator sections which minutely drives, by a pair of piezo-electric elements mounted in said fine actuator sections, a magnetic head supporting section adapted to support a slider on which a magnetic head is attached;

a plurality of holder arms to support each of said fine actuator sections;

an arm block formed by integrally unifying said plurality of holder arms; and

a voice coil motor to drive said arm block;

wherein said fine actuator section is composed of an actuator spring made from one thin steel plate and a base plate made from one thick steel plate, both of which overlap each other,

wherein a driving spring section being connected to said magnetic head supporting section is mounted on said actuator spring and,

in a vicinity of said driving spring section, a pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements along a longitudinal

Cl  
Con if

axis is formed in a state being symmetrical right and left and parallel with respect to a longitudinal center axis of said actuator spring,

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids,

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids,

wherein said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring,

wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and said driving spring section is mounted between said actuator spring and said magnetic head supporting section, and

wherein length of said actuator spring is set so as to end at

C/  
Cont

a tip of said holder arm so that said actuator spring being  
junctioned to said base plate and said holder arm do not overlap  
each other when said base plate is connected to said holder arm.

**Claim 14 (Currently amended - Previously re-presented-formerly**

**dependent claim 14):** A two—stage actuator type magnetic head  
positioning mechanism

comprising:

a plurality of fine actuator sections which minutely drives, by a  
pair of piezo-electric elements mounted in said fine actuator sections, a  
magnetic head supporting section adapted to support a slider on which a  
magnetic head is attached;

a plurality of holder arms to support each of said fine actuator  
sections;

an arm block formed by integrally unifying said plurality of holder  
arms; and

a voice coil motor to drive said arm block;

wherein said fine actuator section is composed of an actuator  
spring made from one thin steel plate and a base plate made from one  
thick steel plate, both of which overlap each other,

wherein a driving spring section being connected to said magnetic  
head supporting section is mounted on said actuator spring and,

in a vicinity of said driving spring section, a pair of driving voids  
to absorb vibration of said magnetic head supporting section and



el  
cor H

extension/shrinkage of said piezo-electric elements along a longitudinal axis is formed in a state being symmetrical right and left and parallel with respect to a longitudinal center axis of said actuator spring,

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids,

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids,

wherein said base plate is opened at a place where said base plate and said magnetic head supporting section overlap each other and is junctioned to said actuator spring in a manner such that said base plate surrounds external edges of said driving spring section of said actuator spring,

wherein said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring, and wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said

C/  
Can't

driving voids along both sides of said mounting position of said magnetic head supporting section, and

said driving spring section is mounted between said actuator spring and said magnetic head supporting section, and

wherein length of said actuator spring is set so as to end at a tip of said holder arm so that said actuator spring being junctioned to said base plate and said holder arm do not overlap each other when said base plate is connected to said holder arm.

**Claim 15 (Previously amended):** The two-stage actuator type magnetic head positioning mechanism according to Claim 9, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

**Claim 16 (Previously amended):** The two-stage actuator type magnetic head positioning mechanism according to Claim 10, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

**Claim 17 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 11, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

Cl  
unit

a center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and wherein

said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 18 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 12, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

said center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, wherein

said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 19 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 13, wherein

e1  
Cont

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

a center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and wherein

said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 20 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 14, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

said center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and wherein

said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 21 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 11,

wherein said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and

wherein said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 22 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 12, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and wherein

said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a

cl  
Cor  
manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 23 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 13, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and wherein

said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 24 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 14, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and wherein

c/x  
cor

said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 25 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 11, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

**Claim 26 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 12, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

**Claim 27 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 13, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

Cl  
Cur

**Claim 28 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 14, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

**Claim 29 (Previously added):** A two—stage actuator type magnetic head positioning mechanism comprising:

a plurality of fine actuator sections which minutely drives, by a pair of piezo-electric elements mounted in said fine actuator sections, a magnetic head supporting section adapted to support a slider on which a magnetic head is attached;

a plurality of holder arms to support each of said fine actuator sections;

an arm block formed by integrally unifying said plurality of holder arms; and

a voice coil motor to drive said arm block;

wherein said fine actuator section is composed of an actuator spring made from one thin steel plate and a base plate made from one thick steel plate,

wherein a driving spring section being connected to said magnetic head supporting section is mounted on said actuator spring and,

in a vicinity of said driving spring section, a pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements along a longitudinal



axis is formed in a state being symmetrical right and left and parallel with respect to a longitudinal center axis of said actuator spring,

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids, and

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids, and only portions of said actuator spring and said base plate surrounding said pair of driving voids are laser spot welded.

**Claim 30 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 29, wherein

said base plate is opened at a place where said base plate and said magnetic head supporting section overlap each other and is junctioned to said actuator spring in a manner such that said base plate surrounds external edges of said driving spring section of said actuator spring.

**Claim 31 (Previously added):** A two—stage actuator type magnetic head positioning mechanism comprising:

a plurality of fine actuator sections which minutely drives, by a pair of piezo-electric elements mounted in said fine actuator sections, a

C1  
x  
lv<sup>n</sup>

wherein both end portions of said pair of piezo-electric elements are connected to said magnetic head supporting section and to said actuator spring in a manner such that said end portions straddle each of said driving voids, and

wherein said base plate is junctioned to one face of said actuator spring in a manner such that said base plate covers said pair of driving voids.

**Claim 32 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 31, wherein

said base plate is opened at a place where said base plate and said magnetic head supporting section overlap each other and is junctioned to said actuator spring in a manner such that said base plate surrounds external edges of said driving spring section of said actuator spring.

**Claim 33 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 29, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

a center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and wherein

said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 34 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 30, wherein

el  
cont

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

said center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and wherein

said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 35 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 31, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

a center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and wherein

said base plate is junctioned to said actuator spring, at least, at a

root area of said center spring and said side springs.

**Claim 36 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 32, wherein

said driving spring section of said actuator spring is composed of a short plate spring and of a pair of side springs made from long plate springs, wherein

said center spring is disposed on said center axis of said actuator spring while each of said side springs is disposed, with said center spring interposed between said side springs, in a direction being intersected almost at right angles to said center axis of said actuator spring, and wherein

said base plate is junctioned to said actuator spring, at least, at a root area of said center spring and said side springs.

**Claim 37 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 31, wherein

said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring, and wherein

each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner

Cl  
cont

Cl  
x  
per

such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and

said driving spring section is mounted between said actuator spring and said magnetic head supporting section.

**Claim 38 (Previously added):** The two-stage, actuator type magnetic head positioning mechanism according to Claim 32, wherein

said pair of driving voids to absorb vibration of said magnetic head supporting section and extension/shrinkage of said piezo-electric elements is formed at both sides of a mounting position of said magnetic head supporting section in said state being symmetrical right and left with respect to said center axis of said actuator spring, and wherein each of said pair of piezo-electric elements is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said piezo—electric elements straddles each of said driving voids along both sides of said mounting position of said magnetic head supporting section, and

said driving spring section is mounted between said actuator spring and said magnetic head supporting section.

**Claim 39 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 5, wherein

C1  
cont

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and wherein

said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 40 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 6, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and wherein

said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving

C/4  
con

voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 41 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 37, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and wherein

said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 42 (Previously added):** The two—stage actuator type magnetic head positioning mechanism according to Claim 38, wherein

said driving spring section of said actuator spring is composed of said center spring made from one short plate spring and a pair of side springs made from long plate springs, and wherein

said center spring is connected to said magnetic head supporting section-and to said actuator spring on said center axis of said actuator



C/  
cm st

spring at an end portion of said magnetic head supporting section being nearer to said holder arm while each of said side springs is connected to said magnetic head supporting section and to said actuator spring in a manner such that each of said side springs straddles each of said driving voids and in a manner such that each of said side springs intersects almost at right angles to each of said piezo—electric elements.

**Claim 43 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to of Claim 5, wherein said pair of driving voids are formed so as to be intersected in a slanting direction in a manner that a distance between said pair of driving voids is increased gradually toward said magnetic head from said holder arm side.

**Claim 44 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to of Claim 6, wherein said pair of driving voids are formed so as to be intersected in a slanting direction in a manner that a distance between said pair of driving voids is increased gradually toward said magnetic head from said holder arm side.

**Claim 45 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to of Claim 37, wherein said pair of driving voids are formed so as to be intersected in a slanting direction in a manner that a distance between said pair of driving voids is increased gradually toward said magnetic head from said holder arm side.

Cl  
cont

**Claim 46 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to of Claim 38, wherein said pair of driving voids are formed so as to be intersected in a slanting direction in a manner that a distance between said pair of driving voids is increased gradually toward said magnetic head from said holder arm side.

**Claim 47 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to of Claim 5, wherein length of said actuator spring is set so as to end at a tip of said holder arm so that said actuator spring being junctioned to said base plate and said holder arm do not overlap each other when said base plate is connected to said holder arm.

**Claim 48 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 6, wherein length of said actuator spring is set so as to end at a tip of said holder arm so that said actuator spring being junctioned to said base plate and said holder arm do not overlap each other when said base plate is connected to said holder arm.

**Claim 49 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to of Claim 37, wherein length of said actuator spring is set so as to end at a tip of said holder arm so that said actuator spring being junctioned to said base plate and said holder

arm do not overlap each other when said base plate is connected to said holder arm.

C1  
per

**Claim 50 (Previously added):** The two-stage Actuator type magnetic head positioning mechanism according to Claim 38, wherein length of said actuator spring is set so as to end at a tip of said holder arm so that said actuator spring being junctioned to said base plate and said holder arm do not overlap each other when said base plate is connected to said holder arm.

**Claim 51 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 29, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

**Claim 52 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 30, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

**Claim 53 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 31, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

Al  
Conch

**Claim 54 (Previously added):** The two-stage actuator type magnetic head positioning mechanism according to Claim 32, wherein a boss section is formed on said base plate so that said base plate is connected to said holder arm.

---